

**REMARKS/ARGUMENTS**

Claims 1-42 are pending in this Application. Claims 1, 15, 30, 33, 34, 37 and 39 have been amended. Claims 19 and 20 are canceled without prejudice. Claims 40-42 are newly added. No new matter has been introduced thereby.

Applicant thanks the Examiner for the interview conducted on May 9, 2007. During the interview, possible focus of claims/subject matter was discussed. The Examiner also called attention to certain prior art references. Accordingly, Applicant has amended claims 1, 15, 30, 33, 34, 37 and 39 and added new claims 40-42 to further clarify the claimed subject matter.

In the Office of April 19, 2007, claims 1-5 and 10-39 were rejected under 35 U.S.C. 103(a) as being unpatentable over Milic-Frayling *et al.* (US 2006/0059138) in view of The National Library of Medicine internet home page (www.webarchive.com from the year 2000) or "NLM". Claims 6-9 were rejected under 35 U.S.C. §103(a) as being unpatentable over Milic Frayling *et al.* in view of The National Library of Medicine internet home page (www.webarchive.com from the year 2000) or "NLM", in further view of "Creating a CD-ROM: Overview of the product field. (CD-ROM authoring and data retrieval software packages; includes company directory and related article on resources for doing research)", Buyers Guide by Bernard Banet, Seybold Report on Desktop Publishing , v7, n6, February 1, 1993, herein referred to as "Banet".

As noted, the cited references, alone or in combination, do not disclose or suggest the present method of identifying and displaying entities having expertise in one or more subjects as recited in amended claim 1.

Specifically, Milic Frayling *et al.* does not show or suggest, at least, calculating a second score for each entity based on the one or more first scores of the relevant documents affiliated with the entity. Milic Frayling *et al.* also does not show or suggest displaying expertise associated with the entities based on the respective second scores of the entities as recited in claim 1. Milic Frayling *et al.* also fails to show or suggest at least one of the entities including an institution or a geographic area affiliated with the set of the one or more documents as recited in

claim 1. In contrast, Milic-Frayling *et al.* merely shows ranking of documents. For example, "... the facility can provide alternative ranking of documents pointed to by the search engine..." Paragraph [0013], Milic-Frayling *et al.*

Additionally, Applicant believes that the Examiner may have misinterpreted Milic-Frayling *et al.* In rejecting claims 1, 30, and 39, the Examiner alleges that Milic-Frayling *et al.* teaches "calculating a second score for each entity based on the one or more first scores of the relevant documents affiliated with the entity; ranking expertise of the entities based on the respective second scores of the entities." The Examiner interprets paragraph 13 of Milic Frayling *et al.* by stating that "the document can be re-ranked according to a specific criteria from a prior search, where re-ranking would constitute some sort of scoring system." Office Action, page 6 lines, 10-14. Using the Examiner's interpretation, Milic-Frayling *et al.* merely re-ranks the documents. Milic-Frayling fails to show or suggest calculating a second score for each entity based on the one or more first scores of the relevant documents affiliated with the entity. That is, Milic Frayling does not show, explicitly or inherently or in any obvious way, calculating the second score for each entity based on the one or more first scores of the relevant documents affiliated with each entity. No second score for each entity based upon the one or more first scores is shown or suggested.

Nor does Milic-Frayling *et al.* display expertise of the entities based on the respective second scores of the entities. See paragraphs [0013], [0019], [0031], [0073], and [0087], etc. in Milic-Frayling *et al.* Specifically, in Paragraph [0013], Milic-Frayling *et al.* explicitly states,

"Furthermore, the facility can provide alternative ranking of documents pointed to by the search engine on the basis of the richer representation of the user's need that the facility created. That can be achieved by pre-fetching, analyzing, and re-ranking a selection of documents that were originally pointed to by the search engine."

As can be seen above, the facility in Milic-Frayling *et al.* merely provides alternative ranking of documents pointed to by the search engine. The Examiner interprets the initial search engine selection of the documents as the first score and the re-ranking of the documents in Milic-

Frayling *et al.* as the second score. However, it's clear that Milic-Frayling *et al.* does not teach calculating a second score for each entity based on the one or more first scores of the relevant documents affiliated with the entity as recited in claim 1. Further, Milic-Frayling *et al.* does not display expertise of the entities based on the respective second scores of the entities as recited in claim 1. Instead, Milic-Frayling *et al.* teaches "...extracting and listing of such entity names and entity relations in the documents and providing information about the particular entity or entity relation which may include a link to a person or company website..." Office Action, page 4 lines 10-13.

Clearly Milic-Frayling *et al.* does not teach "entities" as recited in claim 1. "...each of the entities being associated with expertise in one or more subjects and each of the entities being affiliated with one or more documents in a set, at least one of the entities including an institution or a geographic area affiliated with the set of the one or more documents." Merely as an example, Milic-Frayling *et al.* does not display expertise of an institution or person affiliated with the set of the one or more documents based on the respective second scores as recited in claim 1.

Additionally, the Office Action alleges "Millic-Frayling teaches calculating a third score ..." and "(paragraph 13, where the document can be re-ranked according to a specific criteria from a prior search, where re-ranking would constitute some sort of scoring system). The process is not limited in number of times it can re-rank the result, and therefore, third scores would be encompassed by the re-ranking feature of Milic-Frayling *et al.*" Office Action, page 7, the third paragraph. Again, Applicant believes the "re-ranking" of Milic-Frayling appears to have been misinterpreted. By merely re-ranking the documents, Milic-Frayling *et al.* does not teach calculating a third score for each of a plurality of geographic areas based on the respective second scores of entities located within the each of the plurality of geographic areas as recited in claims 5 and 10.

As noted, the cited references do not teach or suggest each and every feature of the present method of identifying and ranking entities having expertise in one or more subjects as recited in claim 1. The method includes querying a database for documents relevant to a subject, and calculating a first score for each relevant document. The method then determines entities

affiliated with each relevant document in a set. Each of the entities has expertise in one or more subjects. For example, the entity can be an institution or a geographic area affiliated with the document. The method then calculates a second score for each entity based on the first scores of the relevant documents associated with the entity. The method of claim 1 also includes displaying expertise associated with the entities, where the expertise is based on the respective second scores of the entities, and displaying a reference to a geographic area, where the entities are with the geographic area.

In contrast, Milic-Frayling *et al.* merely provide a method to assist a user to evaluate the relevance of a document, for example, the method highlights keywords or phrases that a user inputs for a query (Paragraphs 40, 42). The user can then determine the relevance of the document. A user can also request desired ranking of a document based on the user's need.(Paragraph 55). As discussed above, Milic-Frayling *et al.* may re-rank documents, but the method according to Milic-Frayling *et al.* does not identify or rank entities (person or institution) affiliated with each relevant document in one or more subjects as recited in amended claim 1. Accordingly, claim 1 is patentable over Milic-Frayling *et al.*

Claims 2-5 and 10-29 depend from claim 1 and also recite additional features. Therefore, claims 2-5 and 10-29 should also be allowed based on at least the same reasons and others.

The Examiner also cited Banet combined with Milic-Frayling *et al.* to reject claims 6-9. As noted, the cited references, alone or in combination fail to disclose or suggest the present method of identifying entities having expertise in one or more subjects in the manner claimed. Banet described features of CD-ROM retrieval software using fields such as "author", "date", "title", "subject" as keywords to search for a document. In contrast, the method according to present invention first queries a database for documents relevant to a subject and calculates a score for each document. The method according to the present invention then determines entities affiliated with each relevant document in a set and calculates a second score for each entity having expertise in one or more subjects. The method displays the expertise based on the second score and displays the expertise associated with the respective entities. The method also displays a reference to a geographic area, where the entities are with the geographic

area. It is clear that Banet and Milic-Frayling *et al.* alone or in combination do not show or suggest the method in claim 1. Accordingly, claims 6-9 are patentable over the cited prior art.

Claim 30, which discloses a system for a method for assessing expertise associated with an entity in a subject should also be allowed based on the rationale as discussed for claim 1, and others. Accordingly, claim 30 is also patentable. Dependent claims 31-33 are also allowable for at least the above reasons.

Claim 34 recites a method of assessing expertise associated with an entity in a subject. As an example, the subject can be coronary bypass, nausea, stroke, and others. The method includes querying a database (e.g., Pubmed) for documents relevant to the subject and determining a first set of entities associated with the relevant documents. Again, as an example, the entities could be authors, institutions, and others. The method also includes calculating a score (e.g., quantification, numerical estimate) for each entity in the first set of entities based on the number of relevant documents associated with each entity. As an example, the method initially populates a database with, for example, the entity such as the institution and/or the author with associated score or scores. The method includes populating a second database to include each of the entities in the first set of entities and the score associated with each of the entities in the first set of entities.

Now that the database has been populated, a user can, for example set up a query to determine a desired institution and/or author or the like based upon the subject, which can coronary bypass or stroke, as an example. As provided by claim 34, the method includes receiving a query related to an entity. The method includes determining a second set of entities associated with the entity related to the query. The method includes retrieving from the second database the score associated with each entity in the second set of entities. The method includes presenting to a user the scores of the entities in the second set of entities or a ranking of the entities in the second set of entities based on the scores of the entities in the second set of entities. The score of an entity is indicative of the expertise in the subject associated with the entity. Such features are not suggested or disclosed in cited references. Accordingly, claim 34 should be allowed. Dependent claims 35-38 are also allowable.

Applicant asserts that amended claim 39 is patentable over cited references, alone or in combination. Claim 39 recites a combination of elements such as "querying a database for documents relevant to a subject ", "calculating a first score for each relevant document", "determining entities affiliated with each relevant document", "each of the entities being associated with expertise in one or more subjects ", "each of the entities being affiliated with one or more documents in a set, at least one of the entities including an institution affiliated with the set of the one or more documents, at least one of the entities including a person affiliated with the set of the one or more documents, at least one of the entities including a geographic area affiliated with the set of the one or more documents", and "calculating a second score for each entity based on the one or more first scores of the relevant documents affiliated with the entity". As recited, claim 39 also includes "hierarchically displaying expertise in the subject associated with at least a geographic area, expertise in the subject associated with an institution or institutions located within each geographic area, and expertise in the subject associated with a person or persons associated with each institution, the expertise being determined at least in part based on the second scores of the entities." As noted, such claimed elements are not taught or even suggested by the cited references, alone or in combination. Accordingly, claim 39 and is allowable.

Newly added dependent claims 40-42 depend from claim 34 and are allowable for at least the dependencies on a patentable independent claim. Further, Claims 40-42 are also allowable for the additional features recited therein.

Accordingly, all claims now pending in this application should be allowed for these reasons and others.

**CONCLUSION**

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

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